

WHAT IS CLAIMED IS:

1. An elevator system comprising:  
an elevator car having a car door;  
5 a drive unit connected to said elevator car for moving said elevator car along an elevator shaft wall provided with shaft doors;  
a controller connected to said drive unit for controlling movement of said elevator car along the elevator shaft wall;  
a detecting means mounted in at least one of a region of each of the shaft doors  
10 and in a region of said car door for generating fault information, said detecting means being connected to said controller for generating to said controller said fault information; and  
a status detecting unit connected to said controller for generating to said controller status information about a position and a speed of said elevator car whereby, in case of a fault in the region of one of the shaft doors, said controller permits operation of said elevator car between those floors  
15 which can be reached by said elevator car without having to pass the floor at the shaft door where the fault has occurred.
- 20 2. The elevator system according to claim 1 wherein said controller responds to said fault information representing a fault by placing a service call.
- 25 3. The elevator system according to claim 1 including a node connected to said detecting means and a bus connecting said node with said controller.
4. The elevator system according to claim 3 wherein a signal representing a detected fault generated from said detecting means is processed by said node to generate said fault information.
- 30 5. The elevator system according to claim 1 including a safety bus connecting said controller to at least one of said detecting means and said status detecting unit.

6. The elevator system according to claim 1 wherein said fault information includes a state of an incorrectly closed one of the shaft doors and said car door, said controller responding to said fault information representing an insubstantial gap by placing a service call without interrupting operation of the elevator system and 5 representing a substantial gap by stopping operation of the elevator system and placing a service call.

7. The elevator system according to claim 6 wherein said controller further responds to said fault information representing a substantial gap by moving said elevator 10 car at reduced speed to stop at a floor that can be reached without passing a shaft door having the substantial gap.

8. The elevator system according to claim 1 wherein said status detecting unit is mounted at said elevator car.

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9. The elevator system according to claim 1 wherein said controller further responds to a presence of a fault in the region of said car door by performing a recovery attempt by automatic opening and closing of said car door.

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10. The elevator system according to claim 1 wherein said controller further responds to a presence of a fault in the region of one of the shaft doors by moving said elevator car behind the one shaft door and performing a recovery attempt by opening and closing the one shaft door through automatic opening and closing of said car door.

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11. An elevator system comprising:

an elevator car having a car door;

a drive unit connected to said elevator car for moving the elevator car (2; 12; 28)

along an elevator shaft wall provided with shaft doors;

a controller connected to said drive unit for controlling movement of said elevator

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car along the elevator shaft wall;

a detecting means mounted in at least one of a region of each of the shaft doors  
and a region of said car door and being connected to said controller for  
generating fault information to said controller; and  
a status detecting unit connected to said controller for generating to said  
5 controller status information about a position and a speed of said elevator  
car whereby, in case of a fault in the region of one of the shaft doors, said  
controller moves said elevator car, after any passengers have disembarked,  
into a position directly behind the one shaft door in order to prevent a  
person from being able to fall through an open shaft door into said  
10 elevator shaft.

12. The elevator system according to claim 11 wherein said controller responds to  
said fault information representing a fault by placing a service call.

15 13. The elevator system according to claim 11 including a node connected to said  
detecting means and a bus connecting said node with said controller and wherein a signal  
representing a detected fault generated from said detecting means is processed by said  
node to generate said fault information.

20 14. The elevator system according to claim 11 including a safety bus connecting  
said controller to at least one of said detecting means and said status detecting unit.

15. The elevator system according to claim 11 wherein said fault information  
includes a state of an incorrectly closed one of the shaft doors and said car door, said  
25 controller responding to said fault information representing an insubstantial gap by  
placing a service call without interrupting operation of the elevator system and  
representing a substantial gap by stopping operation of the elevator system at that floor  
where the fault has occurred and placing a service call.

30 16. The elevator system according to claim 11 wherein said controller further  
responds to a presence of a fault in the region of said car door by performing a recovery  
attempt by automatic opening and closing of said car door.

17. An elevator system comprising:  
an elevator car having a car door;  
a drive unit connected to said elevator car for moving said elevator car along an  
elevator shaft wall provided with shaft doors;  
5 a controller connected to said drive unit for controlling movement of said elevator  
car along the elevator shaft wall;  
a detecting means mounted in at least one of a region of each of the shaft doors  
and in a region of said car door for generating fault information, said  
detecting means being connected to said controller for generating to said  
10 controller said fault information; and  
a status detecting unit connected to said controller for generating to said  
controller status information about a position and a speed of said elevator  
car whereby said detecting means ascertains whether a gap formed by an  
incorrectly closed one of the shaft doors or said car door is substantial or  
15 insubstantial, said controller responding to said fault information  
representing a presence of an insubstantial gap by moving said elevator  
car without restriction and placing a service call and said controller  
responding to said fault information representing a presence of a  
substantial gap at one of said shaft doors by moving said elevator car to a  
20 floor that can be reached without passing the one shaft door having the  
substantial gap in order to let passengers disembark.

18. The elevator system according to claim 17 including a node connected to said  
detecting means and a bus connecting said node with said controller and wherein a signal  
25 representing a detected fault generated from said detecting means is processed by said  
node to generate said fault information.

19. The elevator system according to claim 17 wherein said controller responds to  
said fault information representing a substantial gap by stopping operation of the elevator  
30 system at that floor where the fault has occurred and placing a service call.

20. The elevator system according to claim 17 wherein said controller further responds to said fault information by performing a recovery attempt by automatic opening and closing of said car door.